II. REMARKS

Preliminary Remarks:

Claim 1 is amended, and new claims 62 and 63 are added.

Claim 1 is amended by substituting the term "radioincorporation" in place of "radiochemical purity." The terms "radiochemical purity" and "radioincorporation" are used in the specification synonymously and interchangeably. For example, see the reference to "radiochemical purity" on page 6, line 5, the reference to "radioincorporation" on page 25, lines 2-3.

New claims 62 and 63 are directed to the disclosed radiolabeling method wherein a level of radioincorporation that is greater than 96% (claim 62), or is in the range of from 96.3 to 99.5% (claim 63), is achieved. These levels of radioincorporation are described on page 25, lines 3-13.

Patentability Remarks

35 U.S.C. §112, Second Paragraph

Claim 18 was rejected under 35 U.S.C. § 112, second paragraph, because the meaning of "binding specificity" is allegedly indefinite.

The applicant respectfully traverses this ground for rejection. The specification describes assaying to determine the percentage of radiolabeled antibody that binds antigen-bearing cells under conditions of antigen excess. The ratio of the amount of radiolabel that binds to the antigen-bearing cells to the total amount of radiolabel in the radiolabeled antibody preparation is referred to in the specification as the "% binding specificity." The specification describes determining the % binding specificity for a radiolabeled antibody preparation by incubating an aliquot of the radiolabeled antibody preparation with an amount of antigen-bearing cells that provides an excess of antigen, pelleting the cells and the cell-bound radiolabeled antibodies, and measuring the amount of radiolabel that remains in the supernatant. Radioactivity bound to the cells is calculated by subtracting the unbound

radioactivity in the supernatant from the total amount of radiolabel added (see p. 34, lines 18-22). The specification describes measurement of the binding specificity of a radiolabeled antibody preparation with sufficient detail that one skilled in the art would clearly understand the meaning of the term and be able to make the measurement. Accordingly, the applicants submit that the reference to binding specificity of at least 70% in claim 18 is not indefinite, and respectfully request withdrawal of the rejection under 35 U.S.C. §112, Second Paragraph.

35 U.S.C. §112, First Paragraph

Claims 1-16, 18, and 49-61 were rejected under 35 U.S.C. § 112, First Paragraph, as allegedly containing new matter and so failing to comply with the written description requirement.

The official action rejected claim 1 under 35 U.S.C. § 112, First Paragraph, because the term "radiochemical purity" is alleged to be new matter.

The applicant respectfully traverses this ground for rejection of claim 1, because the term "radiochemical purity" is used in the specification synonymously and interchangeably with the term "radioincorporation." For example, see the reference to "radiochemical purity" on page 6, line 5, and the reference to "radioincorporation" on page 25, lines 2-3. Both terms are used to refer to radiolabeling efficiency – the percent of radiolabel incorporated into the product relative to the total amount of radiolabel in the radiolabeling reaction (for example, see p. 7, lines 24-25). As the term "radioincorporation" may be considered to be more suggestive of the efficient incorporation of radiolabel, which is a characteristic of the claimed invention, claim 1 has been amended to use the term "radioincorporation" instead of "radiochemical purity." The sole purpose for the amendment is to ensure that the independent claim uses the better known of two synonymous terms. **The amendment does not affect the scope of the claims and is not made for patentability purposes, since both terms are disclosed in the specification and are used in the specification with the same meaning.**

The official action rejected new claims 49-51 under 35 U.S.C. § 112, First Paragraph, because although Table 1 shows that the claimed method is practiced successfully with incubation times of three, five, or ten minutes, the specification does not expressly state that the claimed method can be practiced successfully with incubation times of "about" three minutes, "about" five minutes, or "about" ten minutes.

The applicant respectfully traverses this ground for rejection. The specification clearly describes the claimed invention as a whole as a radiolabeling method that provides unexpectedly high levels of radioincorporation and specific binding using what were regarded in the art as unusually short incubation times. Examples of the brief incubation times that are sufficient for successful operation of the claimed method are described both in the application text and the original claims using the same degree of precision as the rejected claims. For example, incubation times of "about" two minutes and "about" eight minutes, are described on page 11, lines 4-8; and original claims 6, 7, 25, and 26, are directed to the claimed method wherein sufficient incubation times of "about" 30 seconds, "about" two minutes, "about" five minutes, and "about" eight minutes" are given. Persons skilled in the art would recognize that the three, five, and ten minute incubation times shown in Table 3 are exemplary of the relatively short incubation periods of the disclosed method that are sufficient to provide the desired high level of radioincorporation (*e.g.*, from 96.3 to 99.5% – see Tables 1-3). Accordingly, persons skilled in the art would reasonably consider the claimed invention described by the specification as being a method that can be practiced successfully to obtain results such as those shown in Tables 1-3, using incubation times of about three minutes, about five minutes, and about ten minutes, just as the specification and original claims describe sufficient incubation times by reference to "about" 30 seconds, "about" two minutes, "about" five minutes, and "about" eight minutes. Since the written description of the invention in the specification would have clearly conveyed to one skilled in the art that the applicants were in possession of the subject matter of claims 49-51 when the application was filed, the applicants submit that the use of "about" in claims 49-51 with regard to the incubation times is not new matter.

The official action rejected new claims 52-55 under 35 U.S.C. § 112, First Paragraph, because the specification allegedly does not support the radioincorporation values of "at least about" 96%, 97%, 98%, and 99% stated in these claims.

The applicant respectfully traverses this ground for rejection. As described in the specification, an important practical aspect of the claimed radiolabeling method is that it provides radioincorporation that is "at least" sufficient that the radiolabeled reagent may be administered directly to a patient (*e.g.*, see the paragraph bridging pages 11-12). The specification also states that the claimed radiolabeling method provides greater than 95% radioincorporation of a therapeutic radioisotope (*e.g.*, see page 7, line 25), and discloses experimental data showing that the claimed method can achieve radioincorporation efficiencies of 96.1, 96.3, 96.7, 97.0, 97.2, 97.4, 97.6, 97.8, 98.4, 98.9, 99.2, 99.3, 99.4, and 99.5 (see Tables 1-3 on pages 24-26). The disclosed values of radioincorporation that are achieved with the claimed method are given as decimal values that fall about, as well as exceed, each of the whole number values of 96%, 97%, 98% and 99% in the range of interest (between 95% and 100%). Therefore, one of skill in the art would regard the specification as showing that the claimed method provides radioincorporation of at least about 96%, at least about 97%, at least about 98%, and at least about 99% radioincorporation, as stated in claims 52-55. The indication in the claims that the level of radioincorporation is "at least" the designated level is in accord with the description of the claimed invention as a method that provides radioincorporation of a therapeutic radioisotope that is "at least" sufficient that the radiolabeled reagent may be administered directly to a patient, as noted above. Accordingly, a person of skill in the art would regard the written description as clearly conveying that the applicant was in possession of the subject matter of claims 52-55 when the application was filed.

In view of the foregoing, the applicant respectfully requests that the rejection of the claims under 35 U.S.C. § 112, first paragraph, be withdrawn.

Conclusion

All objections and rejections having been addressed, it is respectfully submitted that the present application is in condition for allowance and a Notice to that effect is earnestly solicited. If any points remain in issue, which the Examiner feels may be best resolved through a personal or telephone interview, he is kindly requested to contact the undersigned attorney at the telephone number listed below.

Respectfully submitted,

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